

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-3 (Canceled).

Claim 4 (Original): A method of designing a semiconductor device having X (X being a natural number) wiring layers, comprising the steps of:

arranging function blocks and elements in a chip area with the use of an automatic layout tool;

arranging main wires in a layer N (N satisfying $0 \leq N \leq X-1$), main wires in a layer N+1, and via-contacts in the layer N with the use of the automatic layout tool, to connect the functional blocks and elements to one another through the main wires and via-contacts; and

arranging extensions that extend in line with the main wires in the layers N and N+1, together with the via-contacts in the layer N, with the use of the automatic layout tool.

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Claim 5 (Original): The method of claim 4, wherein the extensions in the layer N include:

the via-contacts themselves to electrically connect the main wires in the layer N to the main wires in the layer N+1;

an extension formed in the layer N+1 on and beyond each of the via-contacts and in contact with an end of a corresponding one of the main wires formed in the layer N+1, the width of the extension being equal to or narrower than the width of the main wire; and

an extension formed in the layer N under and beyond each of the via-contacts and in contact with an end of a corresponding one of the main wires formed in the layer N, the width of the extension being equal to or narrower than the width of the main wire.

Claim 6 (Original): The method of claim 4, wherein:

arranging each of the extensions formed in the layer N+1, that is in line with the corresponding main wire and is extended beyond the corresponding via-contact; and

arranging each of the extensions formed in the layer N, that is in line with the corresponding main wire and is extended beyond the corresponding via-contact.

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Claim 7 (Original): The method of claim 4, wherein:

arranging each of the extensions formed in the layer N+1, that is orthogonal to the corresponding main wire and is extended beyond the corresponding via-contact; and

arranging each of the extensions formed in the layer N, that is orthogonal to the corresponding main wire and extended beyond the corresponding via-contact.

Claims 8-10 (Canceled).

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